TABLE OF CONTENTS - VOLUME 22

The Metabolism of Estriol in Rabbits. RASHAD Y. KIRDANI, PAUL MUSEY, MICHAEL J. VARKARAKIS and AVERY A. SANDBERG 1

Intracellular Receptors for 5α-Dihydrotestosterone in the Epididymis of Adult Rats. Comparison with the Androgenic Receptors in the Ventral Prostate and the Androgen Binding Protein (ABP) in the Testicular and Epididymal Fluid. V. HANSSON, O. DJOSELAND, E. REUSCH, A. ATTRAMADAL and O. TORGERSEN. 19

Retro Steroids, I. Metabolism of the Progestogen 6-Chloro-9β,10α-Pregna-1,4,6-Triene-3,20-Dione in Man. ROSS DIXON, PAT TORMEY, RONAN LAMBE and AUSTIN DARRAGH 35

Simultaneous Determination of Plasma Estrogens, Androgens, and Progesterone During the Human Menstrual Cycle. CARYN DUPON, ABDOLHAMID HOSSEINIAN and MOON H. KIM. 47

Radioimmunoassay of Plasma Androsterone. E. YOUSSEFNEJADIAN, W. P. COLLINS and I. F. SOMMERVILLE 63

A New Class of Long-Acting Hormonal Steroid Preparation: Synthesis of Oligomeric Estradiol Derivatives. HERBERT KUHL and HANS-DIETER TAUBERT. 73

Progesterone Binding in the Immature Mouse and Rat Uterus. DANIEL PHILIBERT and JEAN-PIERRE RAYNAUD. 89

14-Dehydro-19-Nortestosterone and Its 7α-Methyl Derivative. ALBERT SEGALOFF and R. BRUCE GABBARD. 99

Selective Synthesis of 14-Dehydroestranes. GARY H. RASMUSSON and GLEN E. ARTH. 107

A Simple Competitive Protein-Binding Method for Determination of Progesterone in the Rat Plasma. ZVONIMIR MARIC, ZLATKO KNIEWALD and STEVAN MILKOVIC 113

The Aromatization of (7α-^{3}H) Androstenedione by Human Placental Mitochondria. A.G.C. RENWICK and JANE F. OLIVER. . . . 123

Variations in the Concentrations of Androstenedione in Peripheral Plasma of Women During the Day and During the Menstrual Cycle. JULIA LOBOTSKY and C. W. LLOYD. 133

Alkylation of Brain Corticosteroid Acetyltransferase by 17-Hydroxyprogesterone 17-(9-Oxo-10-Chlorodecanoate) and Related Compounds. ROBERT H. PURDY, P. NARASIMHA RAO and JEROME H. ZOELLER, JR. 139

Synthesis of 2-Hydroxy-Ethynylestradiol and 4-Hydroxy-Ethynylestradiol. H. P. GELBKE, P. BALL, O. HAUPT and R. KNUPPEN. 151

Errata 153

Some Properties of Cortisol-Receptor Complex Isolated from Cytoplasm of Rat Liver and Its Effect on Biosynthesis of Nuclear RNA. NEVENA RIBARAC-STEPIC, DIVNA TRAJKOVIC and DUSAN KANAZIR. 155

In Vitro Effects of ACTH on Uridine Incorporation Into Rapidly Labelled Adrenal RNA of Normal and Dexamethasone-Suppressed Rats. SALVADOR CASTELLS, NICK ADDO and KWAKU KWATENG. 171

Demonstration of a Specific Binding Protein for Testosterone and 5α-Dihydrotestosterone in Rabbit Serum. Separation from the Corticosteroid Binding Globulin (CBG). V. HANSSON, E. M. RITZEN, F. S. FRENCH, C. S. WEDDINGTON, S. N. NAYFEH, E. REUSCH and A. ATTRAMADAL. 185

A Plasma Dexamethasone Radioimmunoassay. A. WAYNE MEIKLE, LYNN G. LAGERQUIST and FRANK H. TYLER. 193

Irreversible Protein Binding of Metabolites of Ethynyl-estradiol *in vivo* and *in vitro*. H. KAPPUS, H. M. BOLT and H. REMMER. 203

Effect of Active Immunisation Against Testosterone-3-BSA on Circulating Levels of Testosterone, LH, Prolactin and Testosterone Antibody Titre in the Male Rat. STEPHEN G. HILLIER, EDGAR N. COLE, GRAHAM V. GROOM, ARTHUR R. BOYNS and EUAN H. D. CAMERON 227

The Biosynthesis of 23,24-Dinor-5-Cholene-3β,20-diol and 23,24-Dinor-5-Cholene-3β,21-diol. ALEX. D. TAIT 239

Steroid Metabolism by Mouse Submaxillary Glands. I. *In Vitro* Metabolism of Testosterone and 4-Androstene-3,17-Dione. JAMES C. COFFEY. 247

Estrogen Receptor Protein of Pancreas. AVERY A. SANDBERG, RASHAD Y. KIRDANI, MICHAEL J. VARKARAKIS and GERALD P. MURPHY. . 259

Progesterone Measurement Using "Stripped" Corticosteroid Binding Globulin (CBG). RICHARD BARANCZUK, THOMAS G. MULDOON and VIRENDRA B. MAHESH 273

Chemical Synthesis and Mass Spectrometric Characterization of Some C-27 Steroids. S. H. MUJTABA NAQVI. 285

1,4-Androstadiene-3,17-Dione Found in the Urine of a Boy. GUNTHER JUNG, WILFRIED A. KONIG, WOLFGANG VOELTER, DEREK GUPTA, GERLIND BREITMAIER and JURGEN R. BIERICH. 293

Book Review. 307

Book Review. 309

A Modified Method for the Estimation of Pregnanediol, Pregnanetriol and Seven Common 17-Ketosteroids in Urine by Gas-Liquid Chromatography. QUTUB H. QAZI and J. GILBERT HILL. . 311

Radioimmunoassay of Contraceptive Steroids. I. Synthesis of 6-Oxomestranol 6-(O-Carboxymethyl) Oxime. N. KUNDU 327

Biosynthesis of Steroids from Cholesterol-^{14}C by Human Adrenal Carcinoma Tissue. SEIKO NISHIDA, RICHARD A. JUNGMANN and JOHN S. SCHWEPPE 337

The Effects of Hypophysectomy and Human Chorionic Gonadotropin Administration on the *in vitro* Metabolism of Progesterone by the Rat Testis. RODNEY A. APPELL. 351

Paper Chromatographic Separation of α-Ecdysone, Ecdysterone, Inokosterone, Makisterone A and Ponasterone A. M. W. GILGAN and T. E. FARQUHARSON. 365

Purification of Estradiol-17β Dehydrogenase from Human Placenta by Affinity Chromatography. CHANG-CHEN CHIN and JAMES C. WARREN. 373

Estrogen Biosynthesis from Testosterone-4-^{14}C by Post-Ovulatory Human Ovaries. Comparison between the Corpus-Luteum Ovary and Its Partner. OLIVE W. SMITH and NATALIE G. ZUCKERMAN 379

Mechanism of Catechol Estrogen Formation in Man. JACK FISHMAN, ITSUO YOSHIZAWA and LEON HELLMAN 401

Influence of the Site of Conjugation on the Specificity of Antibodies to Progesterone. GORDON D. NISWENDER 413

Effect of Hypophysectomy and Gonadotropin Treatment on Metabolism of ^{3}H-Progesterone by Rat Testicular Tissue. EMIL STEINBERGER and MIGUEL FICHER 425

Detection of Synthetic Corticosteroid Analogues by the Competitive Protein-Binding Radioassay. HELEN G. MORRIS, GEORGIA DE ROCHE and CLAIRE M. CARO. 445

Radioimmunoassay of Plasma 20α-Dihydroprogesterone. EMMA FLORENSA and IAN F. SOMMERVILLE 451

Decreased Serum Testosterone Concentration in Male Heroin and Methadone Addicts. FEREIDOUN AZIZI, APOSTOLOS G. VAGENAKIS, CHRISTOPHER LONGCOPE, SIDNEY H. INGBAR, and LEWIS E. BRAVERMAN . . 467

A Difference in the *in vitro* Accumulation and Metabolism of Testosterone -1,2-^{3}H by the Rat Prostate Gland Following Incubation with Ovine or Bovine Prolactin. J. W. LLOYD, J. A. THOMAS, and M. G. MAWHINNEY. 473

Effect of Administered 20β-Hydroxysteroid Dehydrogenase on Serum Progesterone in the Rat. ROBERT T. CHATTERTON, JR. and JANET CHIEN. 485

In vitro Accumulation and Saturation of ^{3}H-Progestins in Selected Brain Regions and in the Adenohypophysis, Uterus and Pineal of the Female Rat. WILLIAM G. LUTTGE and CLEATUS J. WALLIS. 493

11-Dehydrocorticosterone (Compd. A) Formation by the *Microtus* Adrenal. FRANK UNGAR, ROBERT GUNVILLE, and ROBERT W. SEABLOOM . . 503

The Growth Promoting Effect of Cortisol on Human Fetal Lung Cells. BARRY T. SMITH, JOHN S. TORDAY, and C.J.P. GIROUD. 515

Steroids and Steroidases XX. Aggregation in Aqueous Solution of Steroids with Stigmastane Type C-17 Side Chains and Its Influence on Their Enzymic Transformations. J. BRYAN JONES and NICOLAS BASKEVITCH 525

Synthesis of 21-^{3}H-Corticosteroids. A. K. WILLINGHAM and C. MONDER. 539

Steroid Hormones and the Fertilizing Capacity of Spermatozoa. M. H. BRIGGS 547

Glucocorticoid Properties of Progestogens. M. H. BRIGGS and MAXINE BRIGGS. 555

In vitro Progesterone Metabolism in Rat Submaxillary Gland: The Formation of 20α-Hydroxy-4-Pregnen-3-One and Other Substances. JAMES C. COFFEY 561

Effect of Biliary Obstruction on Formation and Metabolism of Bile Acids in Rat. HENRY DANIELSSON. 567

Isolation of 20α and 20β 5β-Pregnane-3α,17α,20,21-Tetrol (Hexahydro-Reichstein's Compound-S) in a Case of Congenital Adrenal Hyperplasia. GIDEON HALPERIN, ANTHYA MULLER, and MICHAEL FINKELSTEIN. 581

Book Review. 589

Selective Deuterium Labeling of Steroidal Estrogens.
JOHN H. BLOCK and CARL DJERASSI. 591

Adrenal Function in Female Rats Before Puberty: The Effects of Gonadectomy. JUDITH A. RAMALEY 597

The Conversion of 23,24-Dinor-5-Cholen-3β-ol to Cortisol by the Canine Adrenal. ALEX D. TAIT. 609

Diurnal Variations of Plasma Testosterone in Men.
JUAN MARIO BARBERIA, JUAN GINER and VICENTE CORTES-GALLEGOS. . . 615

Sterol Metabolism. XXVI. Pyrolysis of Some Sterol Allylic Alcohols and Hydroperoxides. LELAND L. SMITH, MARTIN J. KULIG and JON I. TENG. 627

Intracellular Distribution and Substrate Specificity of the 16α-Hydroxylase in the Adrenal of Human Fetus.
HIROKO YAMASAKI and KYUTARO SHIMIZU. 637

The Influence of Estradiol-17β Dipropionate-Progesterone Ratios on Uterine Glycogen in the Rat. BENJAMIN M. GARRISON, WALTER J. BO and WAYNE A. KRUEGER. 659

Influence of Dietary Bile Acids on Formation of Bile Acids in Rat. HENRY DANIELSSON. 667

In vitro Effects of Estrogens on Rat Prostatic 5α-Reduction of Testosterone. D.K.H. LEE, C. E. BIRD and A. F. CLARK 677

Radioimmunoassay for Methylprednisolone (Medrol®).
W. A. COLBURN and R. H. BULLER 687

Estrogen Mercapturic Acids in the Adult Male Rat.
JOHN S. ELCE and JUNE CHANDRA. 699

Estrogen Receptor·Anti-estrogen Complex: Atypical Binding by Uterine Nuclei and Effects on Uterine Growth.
J. H. CLARK, J. N. ANDERSON and E. J. PECK, JR. 707

The Identification of Androstenedione and Androstenedione 3-enol Glucuronide in the Blood of a Woman with an Interstitial Cell Ovarian Tumor after 4-^{14}C-Testosterone.
ROBERT K. RHAMY and HARRY E. HADD. 719

In Vitro Studies on an HCG Responsive, Testosterone Secreting Adrenal Cortical Adenoma. DONALD E. PITTAWAY, RICHARD N. ANDERSEN and JAMES R. GIVENS. 731

A New Approach for Quantitative Evaluation of Cross-Reactivity of Steroids with an Antiserum by Radioimmunoassay : Application to a Highly Specific Antiestriol. S. DE LAUZON, N. CITTANOVA, B. DESFOSSES and M. F. JAYLE 747

Methandienone-I. A Convenient Method for the Separation of 17α-Methyl-17β-Hydroxyandrosta-1,4-dien-3-one and 17α-Methyl-17β-Hydroxyandrosta-1,4,6-trien-3-one. A. K. LALA and A. B. KULKARNI 763

Plasma Estradiol-17β Level in the Domestic Fowl. A. SCHROCKSNADEL, A. BATOR and J. FRICK 767

Radioimmunoassay Method for Six Steroids in Human Plasma. P. F. BRENNER, R. GUERRERO, Z. CEKAN and E. DICZFALUSY 775

Estriol Metabolism in the Baboon: Analysis of Urinary and Biliary Metabolites. PAUL I. MUSEY, RASHAD Y. KIRDANI, THONGCHAI BHANALAPH and AVERY A. SANDBERG. 795

The Synthesis of 23,24-^{14}C-Ecdysone. WILLIAM B. SMITH and GEORGE P. NEWSOROFF 819

The Structure of Itesmol and Its C-24 Congenor. PAUL R. ZANNO, KOJI NAKANISHI, JOSEPHINA G. MORALES and XORGE A. DOMINGUEZ . . . 829

Steroids from Starfish. YOUNUS M. SHEIKH, M. KAISIN and CARL DJERASSI 835

A Radioimmunoassay for Deoxycorticosterone in Human Peripheral Plasma Using Sephadex LH-20 Chromatography. ALBERT CASTRO, DAGMAR BARTOS, BARBARA JELEN and MARIA KUTAS 851

Radioimmunoassay of Plasma Testosterone Without Chromatography: A Comparison of Four Antisera, and the Evaluation of a Novel Approach to Liquid Scintillation Counting. J. P. P. TYLER, J. F. HENNAM, J. R. NEWTON and W. P. COLLINS 871

The Influence of Conjugated Estrogens in Radioimmunoassays Using Different Antibodies Against Estradiol-17β. BRITT BOILERT, LARS-ERIC EDQVIST, ELOF D. B. JOHANSSON, PAUL LINDBERG and KJELL MARTINSSON 891

Errata 895

Announcement 896